

# Exhibit 3

**Infringement Claim Chart for U.S. Pat. No. US7256899B1 v. SCANTECH (“Defendant”)**

(See Accused Product List at end of chart for models)

Claim16	Evidence
<p>16. A system for acquiring an approximation of a surface geometry of a 3-dimensional object comprising:</p>	<p>The SCANTECH iReal 2E Color 3D Scanner is a system for acquiring an approximation of a surface geometry of a 3-dimensional object.</p> <p>For example, the iReal 2E Color 3D Scanner is a 3D scanning device for measuring the three-dimensional shape of an object using projected light patterns and a camera system. The iReal 2E Color 3D Scanner includes a scanner head that projects a series of light patterns (e.g. parallel stripes) onto the scan target. When light projects onto the object's surface, the patterns become distorted. The camera system captures these images and sends them for processing to a computer executing 3D scanning software.</p> <div data-bbox="590 792 1955 1252" style="border: 1px solid green; padding: 10px;"> <p><b>The iReal 2E Color 3D Scanner</b></p> <div data-bbox="625 938 1919 1224" style="border: 1px solid red; padding: 5px;"> <p>The iReal 2E handheld color 3D scanner has a large depth of field and scanning area and is tailored for medium and large objects and portrait scanning. Adopting infrared VCSEL structured light, you can experience the safety and comfort of no-light vision. It can scan without sticking markers, quickly obtain the color texture and geometric shape information of the surface on the object, and combine the mixed mode to meet a wider range of scanning scenarios. Advanced algorithm functions, easy-to-use software, ergonomic design, portability, and durability, it helps create an efficient, accurate, texture-rich color 3D scanning solution for users.</p> </div> </div> <p>Source: <a href="https://www.ireal3dscan.com/main/1start/about.html">https://www.ireal3dscan.com/main/1start/about.html</a></p>



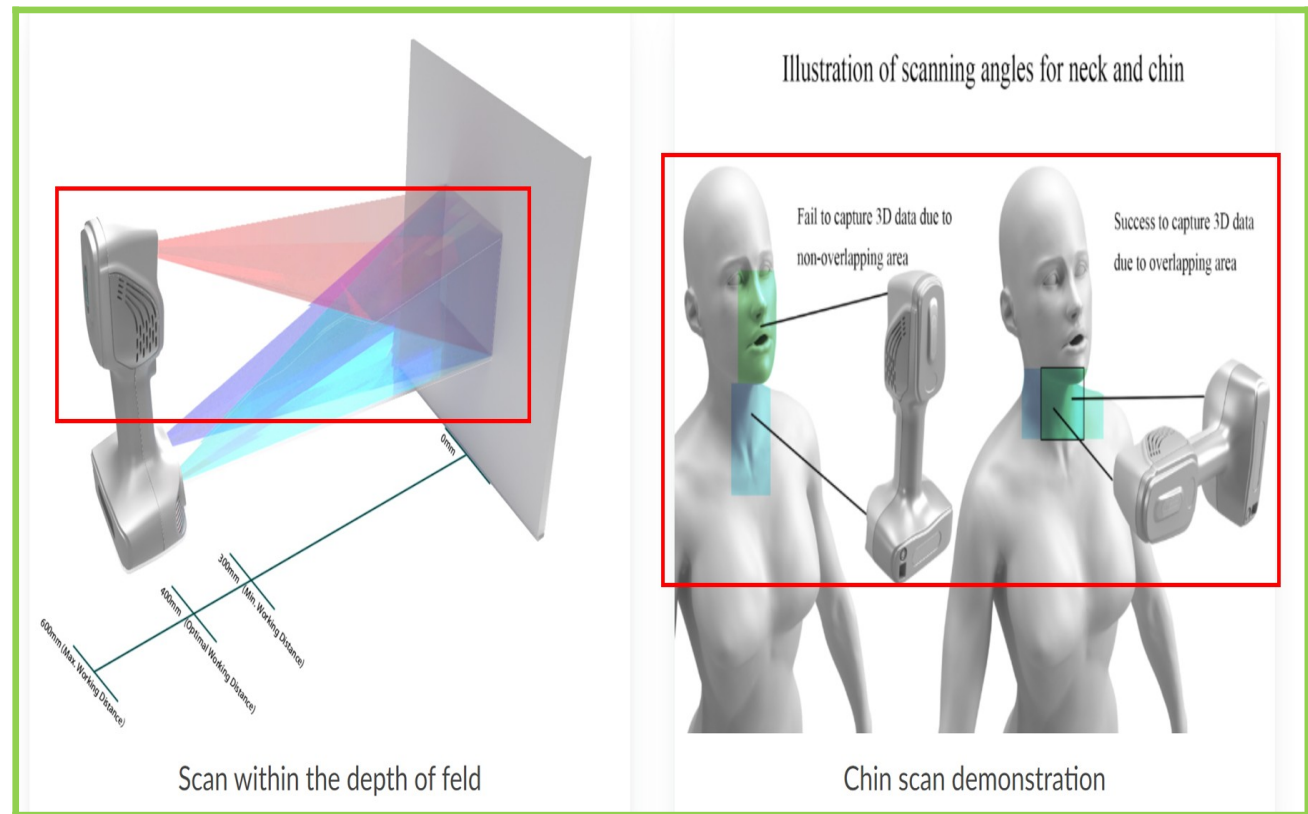
Source: <https://www.ireal3dscan.com/main/1start/about.html>

## The Principle of 3D Scanner

The iReal 2E handheld 3D scanner is a 3D scanner based on the principle of structured light. It consists of three VCSEL infrared emitters and a CCD camera. The VCSEL is used to project a fixed coded speckle onto the measured object. The change of the spot can be used to calculate the spatial position  $(X, Y, Z)$  coordinates of a point on the object, and then obtain the surface contour point cloud data of the object for 3D reconstruction.

The position of a point in three-dimensional space is generally represented by  $(X, Y, Z)$  coordinates.

Source: <https://www.ireal3dscan.com/main/1start/about.html>



Source: <https://www.ireal3dscan.com/main/1start/about.html>

means for establishing an object coordinate system in known relationship to the object;

The SCANTECH iReal 2E Color 3D Scanner includes means for establishing an object coordinate system in known relationship to the object.

For example, the iReal 2E Color 3D Scanner includes a computer to establish an object coordinate system using an image of the target object, having reference features thereon, and the position of the scanner head when the image was

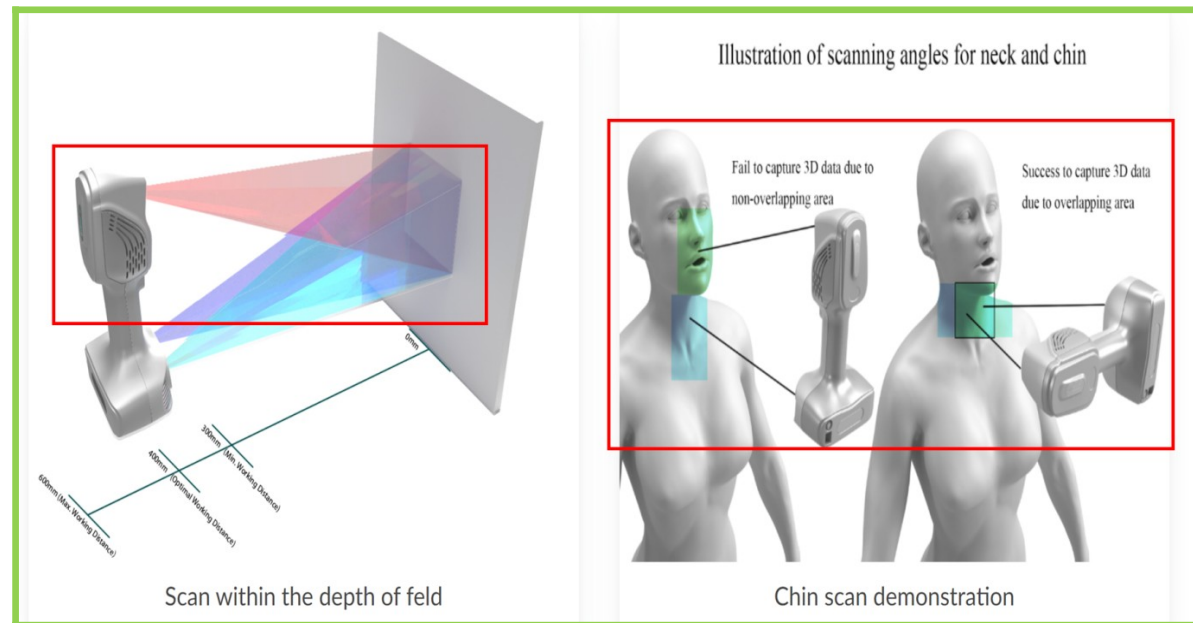
captured.

### The Principle of 3D Scanner

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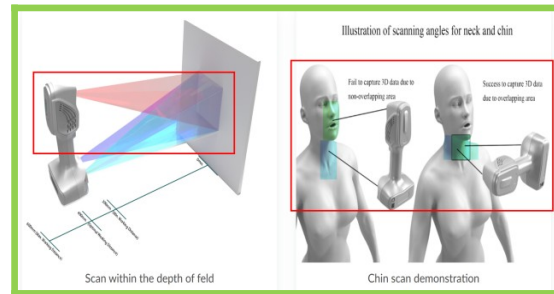


Source: <https://www.ireal3dscan.com/main/1start/about.html>

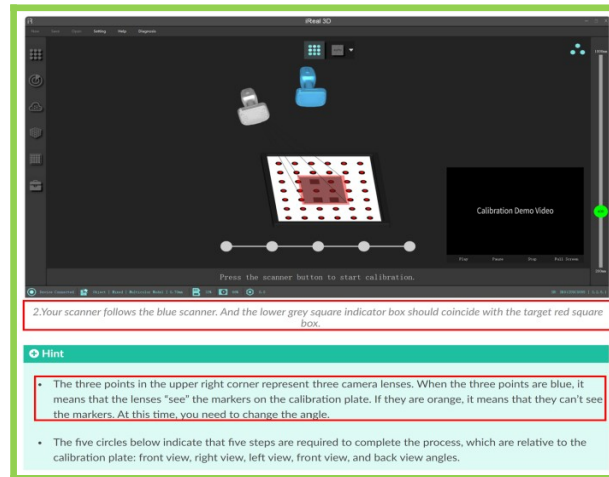
means for projecting a pattern of structured light of known geometry onto the object;

The SCANTECH iReal 2E Color 3D scanner includes means for projecting a pattern of structured light of known geometry onto the object.

For example, the iReal 2E Color 3D scanner includes a light source (e.g. a blue light LED) that projects a series of light patterns (e.g. parallel stripes) onto the scan target.



Source: <https://www.ireal3dscan.com/main/1start/about.html>



Source: <https://www.ireal3dscan.com/main/2user/calibration.html>

means for forming an image of an intersection of the pattern of structured light with the object;

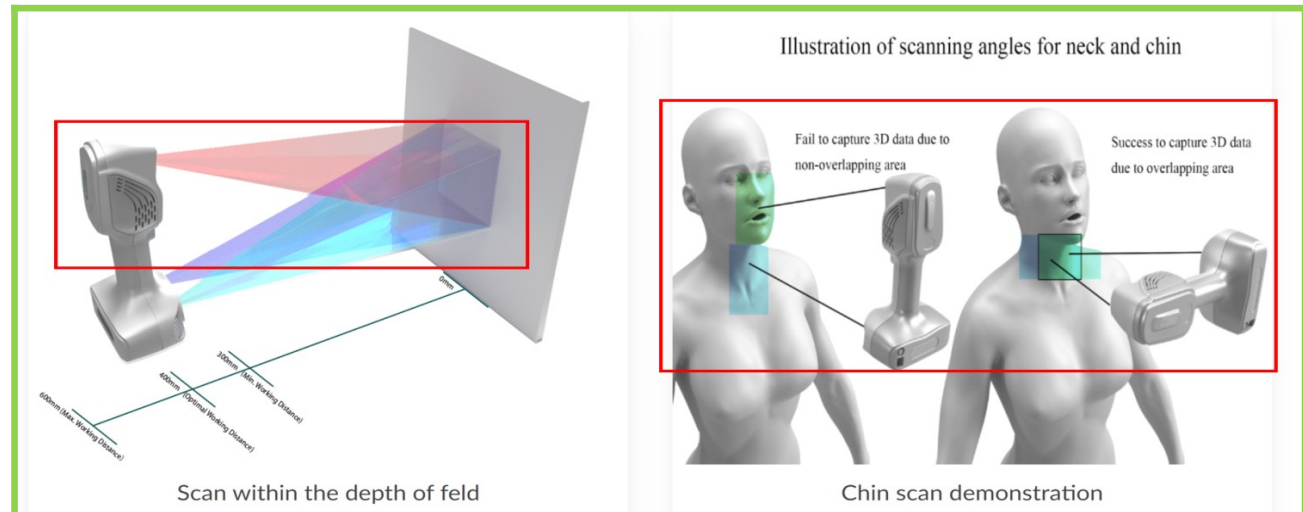
The SCANTECH iReal 2E Color 3D scanner includes means for forming an image of an intersection of the pattern of structured light with the object.

For example, the iReal 2E Color 3D scanner includes a camera system. The camera system includes an electro-optical image sensor (e.g. CMOS or CCD image sensor depending on the model) that captures the patterns of the light projected onto the target object.

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The position of a point in three-dimensional space is generally represented by (X, Y, Z) coordinates.



Source: <https://www.ireal3dscan.com/main/1start/about.html>



processing means for generating a set of data characterizing the intersection relative to a position of the pattern of light;

The SCANTECH iReal 2E Color 3D scanner includes processing means for generating a set of data characterizing the intersection relative to a position of the pattern of light.

For example, the non-contact scanner includes an image processor for processing the images of light patterns captured by the camera system.

## Technical Principle

iReal 2E handheld 3d scanner adopts structured light scatter decoding technique, which is a method of optical measurement based on the triangulation principle. It involves projecting a non-periodic random digital scatter onto the object surface, and the morphology of the random digital scatter is then modulated by the information on the object surface. Due to the randomness of the digital scatter, the height information of any point on the object surface can be uniquely determined by the tiny field of the scatter image there, and thus the 3D information of the object surface can be accurately measured. The 3D point cloud data (.asc/.ply) of the object surface is obtained by scanning and stitching from multiple angles, and then the point cloud is reconstructed to form a triangular mesh by the meshing algorithm, and the 3D model of the object (.stl/.obj) is obtained.



What are the requirements for computers for running iReal 3D scanning software?

### Recommended computer configuration (minimum):

CPU processor: i7-10750H and above.

Memory: 32G and above.

Graphics card: NVIDIA GTX1660Ti and above.

Independent video memory: 4G and above.

USB 3.0 interface.

Windows 10/Windows 11 system 64-bit.

Source: <https://www.ireal3dscan.com/products/ireal-2e-3d-scanner/>



	<div data-bbox="795 266 1390 331" data-label="Section-Header"> <h2>Efficient scanning</h2> </div> <div data-bbox="793 380 1740 483" data-label="Text"> <p>With the advantages of cutting-edge algorithm functions, easy-to-use software, ergonomic design, portable and durable, iReal 2E creates an efficient, accurate and rich texture 3D color measurement solution.</p> </div> <p>Source: <a href="https://it3d.com/en/3d-scanners/color/scantech-ireal-2e/">https://it3d.com/en/3d-scanners/color/scantech-ireal-2e/</a></p>
<p>transmitting means for transmitting some portion of the image or intersection data to a receiver;</p>	<p>The SCANTECH iReal 2E Color 3D scanner includes transmitting means for transmitting some portion of the image or intersection data to a receiver.</p> <p>For example, the iReal 2E Color 3D scanner includes a transmitter (e.g. wireless Bluetooth transmitter or wired USB transmitter, depending on the model) for transmitting data associated with the captured images to a processor system.</p> <div data-bbox="787 876 1726 1295" data-label="Complex-Block"> <div data-bbox="814 889 886 945" data-label="Image"> </div> <div data-bbox="886 901 1631 935" data-label="Section-Header"> <h3>What's included in the product package of iReal 2E?</h3> </div> <ul style="list-style-type: none"> <li>A iReal 2E 3D handheld scanner;</li> <li>1 PC master plate;</li> <li>1 PC USB 3.0 cable 4m;</li> <li>1 PC power adapter;</li> <li>1 PC marker – Ø6mm;</li> <li>Waterproof case;</li> <li>1 PC iReal 3D software;</li> <li>1 set software Dongle;</li> <li>Paper materials (shipment list, warranty card, product qualification, delivery confirmation.)</li> </ul> </div> <p>Source: <a href="https://www.ireal3dscan.com/faqs-category/ireal-2e/">https://www.ireal3dscan.com/faqs-category/ireal-2e/</a></p>

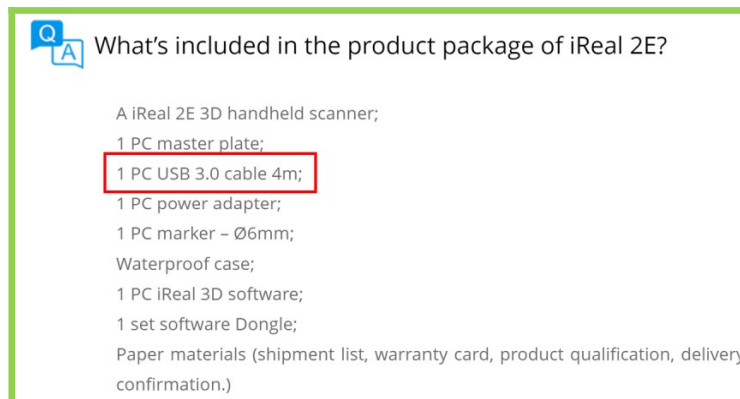
Data output	Output formats	OBJ, STL, PLY, ASC, SK
	3D printing	Support
	Working temperature	0°C ~ 40°C
	Interface mode	USB 3.0
	Weight	850 g
Hardware	Dimensions	140 mm × 94 mm × 258 mm
	Structure	3 sets of invisible light sources & camera groups & auxiliary lights

Source: <https://www.3d-scantech.com/wp-content/uploads/2022/07/iReal-2E-2022-Color-3D-Scanner-Brochure.pdf>

receiving means for receiving the transmitted processed intersection data;

The SCANTECH iReal 2E Color 3D scanner includes receiving means for receiving the transmitted processed intersection data.

For example, the iReal 2E Color 3D scanner includes a receiver (e.g. wireless Bluetooth transmitter or wired USB transmitter) is used for receiving data associated with the captured images to provide the data to a computer for further processing.



Source: <https://www.ireal3dscan.com/faqs-category/ireal-2e/>

Data output	Output formats	OBJ, STL, PLY, ASC, SK
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tracking means for tracking the position of the projected pattern of structured light;

The SCANTECH iReal 2E Color 3D scanner includes tracking means for tracking the position of the projected pattern of structured light.

For example, the non-contact scanner includes a position indicator for indicating the position at which a light pattern image was captured in relation to the target object.

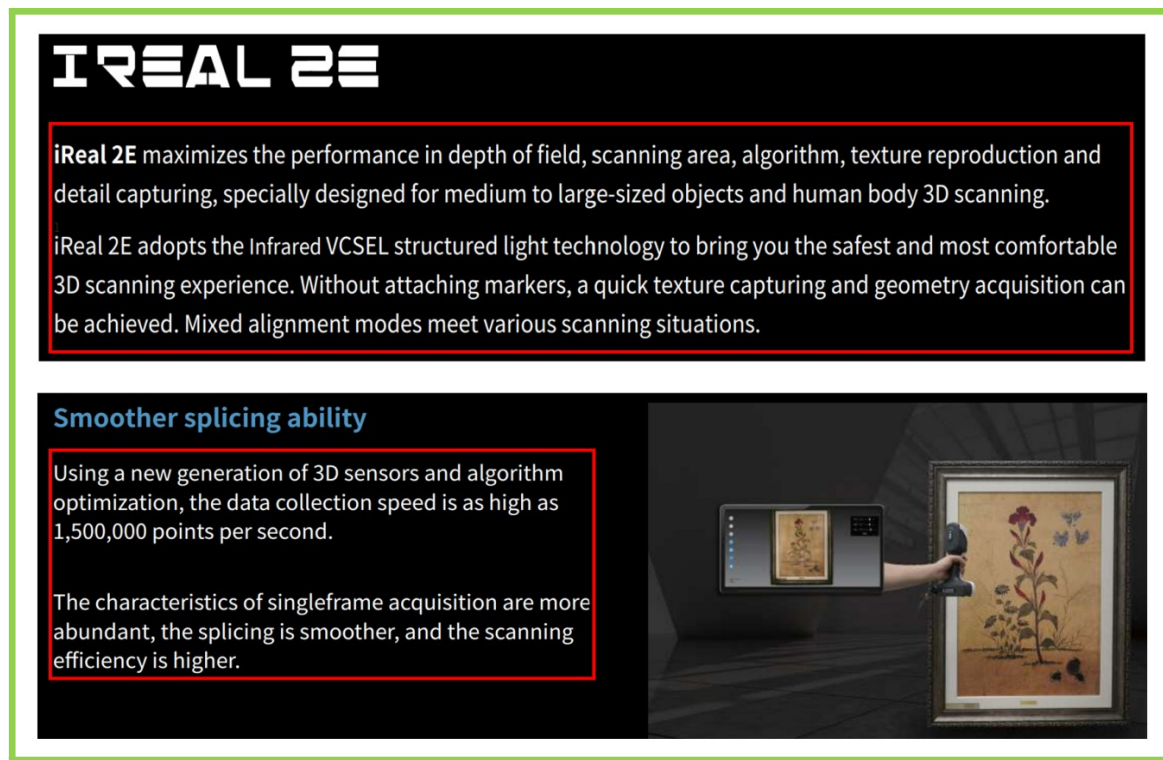


Source: <https://www.ireal3dscan.com/main/1start/about.html>

means for associating each intersection datum with the position of the projected pattern of light at the time the image corresponding to the datum was formed;

The SCANTECH iReal 2E Color 3D scanner includes means for associating each intersection datum with the position of the projected pattern of light at the time the image corresponding to the datum was formed.

For example, a scanner tracking subsystem is used to track the position of the non-contact scanner as it is moved from an initial position to other positions to capture light pattern images from different locations around the target object.



Source: <https://www.3d-scantech.com/wp-content/uploads/2022/07/iReal-2E-2022-Color-3D-Scanner-Brochure.pdf>

transforming means

The SCANTECH iReal 2E Color 3D scanner includes transforming means for

for transforming each intersection datum into coordinates of the object coordinate system; and

transforming each intersection datum into coordinates of the object coordinate system.

For example, the computer calculates the X-Y-Z coordinate points of the entire surface geometry of the target object from the light pattern images as the light pattern shifts from the initial position.

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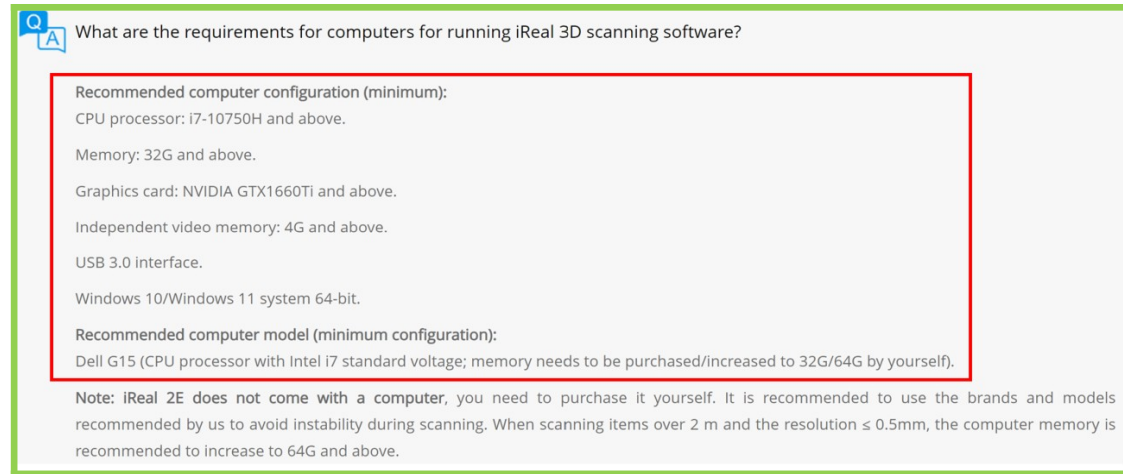
Source: <https://www.ireal3dscan.com/main/1start/about.html>

### **Efficient scanning**

With the advantages of cutting-edge algorithm functions, easy-to-use software, ergonomic design, portable and durable, iReal 2E creates an efficient, accurate and rich texture 3D color measurement solution.

Source: <https://it3d.com/en/3d-scanners/color/scantech-ireal-2e/>

<p>accumulating means for accumulating the transformed coordinates to form a model approximating the surface geometry of the object.</p>	<p>The SCANTECH iReal 2E Color 3D scanner includes accumulating means for accumulating the transformed coordinates to form a model approximating the surface geometry of the object.</p> <p>For example, the computer that executes algorithms to align every scan image automatically to create a highly accurate, complete 3D digital model of the object.</p> <div data-bbox="840 487 1696 831" style="border: 1px solid green; padding: 10px;"> <p><b>The Principle of 3D Scanner</b></p> <p>The iReal 2E handheld 3D scanner is a 3D scanner based on the principle of structured light. It consists of three VCSEL infrared emitters and a CCD camera. The VCSEL is used to project a fixed coded speckle onto the measured object. The change of the spot can be used to calculate the spatial position [(X, Y, Z) coordinates of a point on the object, and then obtain the surface contour point cloud data of the object for 3D reconstruction.</p> <p>The position of a point in three-dimensional space is generally represented by (X, Y, Z) coordinates.</p> </div> <p>Source: <a href="https://www.ireal3dscan.com/main/1start/about.html">https://www.ireal3dscan.com/main/1start/about.html</a></p> <div data-bbox="688 941 1843 1323" style="border: 1px solid green; padding: 10px;"> <p style="text-align: center;"><b>Technical Principle</b></p> <p>iReal 2E handheld 3d scanner adopts structured light scatter decoding technique, which is a method of optical measurement based on the triangulation principle. It involves projecting a non-periodic random digital scatter onto the object surface, and the morphology of the random digital scatter is then modulated by the information on the object surface. Due to the randomness of the digital scatter, the height information of any point on the object surface can be uniquely determined by the tiny field of the scatter image there, and thus the 3D information of the object surface can be accurately measured. The 3D point cloud data (.asc/.ply) of the object surface is obtained by scanning and stitching from multiple angles, and then the point cloud is reconstructed to form a triangular mesh by the meshing algorithm, and the 3D model of the object (.stl/.obj) is obtained.</p> </div> <p>Source: <a href="https://www.ireal3dscan.com/products/ireal-2e-3d-scanner/">https://www.ireal3dscan.com/products/ireal-2e-3d-scanner/</a></p>
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Source: <https://www.ireal3dscan.com/products/ireal-2e-3d-scanner/>

### **Accused Product List**

iReal M3

iReal 2E